

PERCENTAGE LOG OF WATER-WELL CUTTINGS
UTAH GEOLOGICAL SURVEY

DWRi Appropriation #: 07-09-004-M00
 Location: (D-37-22)12abb, San Juan County, Utah
 Driller: Beeman Drilling Company

Well Owner: City of Blanding
 Win #: 430228
 Geologist: Janae Wallace, 12/6/07

Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
0	10	100	0	0	0	0	pink and tan-gray clay, silt, sand, and gravel composed of sandstone and siltstone; calcareous
10	20	0	10	90	0	0	brown and gray with minor yellow and black sand and sandstone; sand is fine to coarse and consists dominantly of quartz with minor feldspar, mafic minerals, and chert; non calcareous; black carbonaceous material; Dakota Sandstone?
20	30	0	100	0	0	0	dark brown fine to medium sand composed of quartz, feldspar, lithic fragments, and mafic minerals; black carbonaceous material; calcareous
30	40	0	100	0	0	0	“
40	50	30	70	0	0	0	tan, gray, and minor white-yellow sand with chert and limestone gravel; trace green mudstone; calcareous; calcareous; Burro Canyon Formation?
50	60	20	0	80	0	0	green, yellow, and tan mudstone, sandy mudstone with chert gravel; non calcareous

*unc=unconsolidated; disag=disaggregated; ms=mudstone, sandy mudstone, and siltstone;
 ss=sandstone; ls=limestone

Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
60	70	10	0	80	10	0	green, yellow, and tan mudstone, sandy mudstone and fine-grained sandstone with chert gravel; non calcareous
70	80	10	0	45	45	0	yellow-green, white-green, tan and trace pink mudstone and sandstone with chert gravel; trace black carbonaceous material; non calcareous
80	90	0	80	10	10	0	“ yellow pink, green, and tan
90	100	0	80	10	10	0	“
100	110	5	80	5	10	0	yellow-tan, green, and gray sand, sandstone, and mudstone with chert gravel; sandstone is composed dominantly of quartz with minor feldspar and chert; non calcareous
110	120	5	80	5	10	0	“ trace pyrite and galena
120	130	0	95	tr	5	0	white-gray and green sand and sandstone; trace chert and mudstone
130	140	0	0	100	0	0	red and minor green-yellow and gray siltstone; non calcareous; Brushy Basin Member of the Morrison Formation?
140	150	0	0	100	0	0	“
150	160	0	0	100	0	0	“
160	170	0	0	100	0	0	“
170	180	0	0	100	0	0	“ trace chert and pyrite
180	190	0	0	100	0	0	“

*unc=unconsolidated; disag=disaggregated; ms=mudstone, sandy mudstone, and siltstone;
ss=sandstone; ls=limestone

Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
190	200	0	0	100	0	0	green and red siltstone; trace pyrite; non calcareous
200	210	0	0	98	2	0	green-white and minor red mudstone, sandy mudstone, and minor sandstone; trace pyrite; non calcareous
210	220	0	0	100	0	0	green-white and minor red mudstone and sandy mudstone; non calcareous
220	230	0	10	90	0	0	red-orange and green-gray sand, siltstone, sandy mudstone, and mudstone; sand consists of quartz, feldspar, lithic fragments, and mafic minerals; trace pyrite; slightly calcareous
230	240	0	0	75	25	0	green and gray with trace pink sandy mudstone, mudstone, and fine- to medium-grained sandstone; trace pyrite; slightly calcareous
240	250	0	0	90	10	0	“
250	260	0	0	75	25	0	“ green, pink, gray, purple, and orange
260	270	0	0	75	25	0	“ green, pink, and pink gray
270	280	0	0	75	25	0	“
280	290	0	0	75	25	0	“
290	300	0	0	75	25	0	“ and brown; trace chert
300	310	0	0	90	10	0	“ green, pink, brown, gray, and tan; non calcareous
310	320	0	0	95	5	0	“

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ss=sandstone; ls=limestone

Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
320	330	0	0	100	0	0	green and minor pink siltstone and sandy mudstone; non calcareous
330	340	0	0	100	0	0	brown and green siltstone and trace sandy mudstone; slightly calcareous
340	350	0	0	100	0	0	green, pink, brown, and gray sandy mudstone and mudstone, with trace sandstone; trace pyrite; calcareous
350	360	0	0	50	50	0	green, pink, brown, and gray sandy mudstone, mudstone, and fine- to medium-grained sandstone; slightly calcareous
360	370	0	0	50	50	0	“
370	380	0	0	75	25	0	“
380	390	0	0	25	75	0	“
390	400	0	0	75	25	0	“
400	410	0	0	78	20	2	green, brown, gray, and orange-pink sandy mudstone, mudstone, siltstone, and fine- to medium-grained sandstone with minor limestone; slightly calcareous
410	420	0	0	78	20	2	“
420	430	0	0	78	20	2	“ calcareous
430	440	0	0	95	5	tr	brown and brown-purple siltstone, mudstone, sandy mudstone, and sandstone with trace limestone; calcareous

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Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
440	450	0	0	93	5	2	green, brown, gray, and pink-tan sandy mudstone, mudstone, siltstone, and fine- to medium-grained sandstone with minor limestone; calcareous
450	460	0	0	80	20	0	green and tan with minor brown and red siltstone, mudstone, sandy mudstone and fine- to medium-grained sandstone; calcareous
460	470	0	0	80	20	tr	“ trace limestone
470	480	0	0	80	20	tr	“
480	490	0	0	80	20	tr	“
490	500	0	0	20	80	tr	green and green-gray mudstone with fine- to medium-grained sandstone and trace limestone; trace brown carbonaceous plant fossil?; calcareous
500	510	0	0	25	75	tr	“
510	520	0	0	50	50	tr	“
520	530	0	90	10	tr	0	gray-white and tan with minor green quartz-rich sand with minor feldspar and lithic fragments, and mudstone and sandy mudstone; trace pyrite; calcareous
530	540	0	0	25	75	tr	green, gray, and pink quartz-rich sandstone, sandy mudstone, and mudstone with trace limestone; calcareous

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Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
540	550	0	0	50	50	tr	green, gray, and pink sandstone, sandy mudstone and mudstone; sandstone is fine- to medium-grained and consists of quartz, feldspar, and lithic fragments; trace pyrite; trace limestone; calcareous
550	560	0	50	25	25	0	gray, brown, and green sand, sandstone, and sandy mudstone; sandstone is fine- to medium-grained and consists of quartz, feldspar, and lithic fragments; calcareous
560	570	0	80	10	10	0	“
570	580	0	80	10	10	0	“
580	590	0	0	50	50	tr	red-brown, white, green, and green gray siltstone, sandstone, and mudstone; sandstone is fine-grained and consists of quartz, feldspar, and lithic fragments; trace limestone; calcareous
590	600	0	0	50	50	tr	“
600	610	0	25	50	25	tr	gray, red, green, and pink sand, sandstone, siltstone, and sandy mudstone; sand is fine to coarse and consists of quartz, feldspar, and lithic fragments; trace limestone (rounded as clasts?); calcareous
610	620	0	0	25	75	tr	red, tan, green, gray, and orange sandstone and mudstone; sand is fine to medium and consists of quartz, feldspar, and lithic fragments; trace limestone (rounded as clasts?); calcareous

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Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
620	630	0	90	5	5	0	gray, tan, green, red, and pink sand, sandstone, and mudstone; sand is fine to medium and is dominantly quartz with minor feldspar and lithic fragments; calcareous
630	640	0	0	75	25	tr	red and green mudstone and quartz-rich sandstone; trace limestone; trace gypsum; calcareous
640	650	0	0	75	25	0	“
650	660	0	0	75	23	2	red, gray, and green sandy mudstone with sandstone and limestone; sandstone consists of quartz, feldspar, and lithic fragments; calcareous
660	670	0	0	75	23	2	“
670	680	0	0	90	5	5	“
680	690	0	0	90	5	5	“
690	700	0	0	80	18	2	“
700	710	0	0	75	25	tr	red, pink, and white-gray siltstone, sandstone, and mudstone; sandstone is fine-grained and dominantly consists of quartz with minor feldspar and lithic fragments; trace limestone; calcareous
710	720	0	10	20	70	tr	red and pink sand and sandstone with green and red mudstone; sand is fine to medium and is dominantly composed of quartz with minor feldspar and lithic fragments; trace limestone; calcareous; Salt Wash Member of the Morrison Formation?

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ss=sandstone; ls=limestone

Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
720	730	0	80	10	10	tr	pink sand with minor red and green siltstone and sandstone; sand is fine to medium and is dominantly composed of quartz with minor feldspar and lithic fragments; trace limestone and gypsum; calcareous
730	740	0	10	20	70	tr	red, pink, green, and gray sand, sandstone, and mudstone; sand is fine to medium and consists of quartz, feldspar, lithic fragments, and mafic minerals; trace limestone; calcareous
740	750	0	10	10	80	tr	“
750	760	0	80	10	10	0	pink with minor red and green sand, sandstone, mudstone, and siltstone; sand is fine- to medium and dominantly consists of quartz with minor feldspar and lithic fragments; calcareous
760	770	0	70	20	10	tr	“ trace limestone
770	780	0	50	20	30	0	“
780	790	0	0	50	50	0	red and pink sandstone, siltstone, and mudstone; sandstone is fine- to medium-grained and consists of quartz, feldspar, and lithic fragments; calcareous
790	800	0	10	50	40	0	red and pink sand, sandstone, siltstone, and mudstone; sandstone is fine- to medium-grained and consists of quartz, feldspar, and lithic fragments; calcareous

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Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
800	810	0	0	10	90	tr	red and pink with minor green and gray sandstone, siltstone, and sandy mudstone; trace limestone; sandstone is fine- to medium-grained and dominantly consists of quartz with minor feldspar and lithic fragments; calcareous
810	820	0	0	90	10	tr	red and pink sandstone, siltstone, and mudstone; sandstone is fine-grained to very fine-grained; trace limestone; calcareous
820	830	0	0	50	50	tr	pink-orange and red sandstone, siltstone, and mudstone; trace limestone; calcareous
830	840	0	100	tr	0	0	pink-gray and red sand with trace siltstone; sand is fine to medium and consists of quartz, feldspar, and lithic fragments; calcareous
840	850	0	0	5	95	0	pink and red sandstone and siltstone; sandstone is fine- to coarse-grained and consists dominantly of quartz with feldspar and lithic fragments; calcareous
850	860	0	0	25	75	tr	orange-pink and red-brown with trace gray sandstone and siltstone; sandstone is fine- to coarse-grained and consists of quartz, feldspar, lithic fragments, and mafic minerals; trace limestone; calcareous
860	870	0	0	25	75	tr	“
870	880	0	0	100	0	0	red-brown and minor white-gray siltstone; trace chert; calcareous; Summerville Formation?

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Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
880	890	0	0	90	10	0	brown mudstone with minor orange and white siltstone and fine-grained green sandstone; calcareous
890	900	0	0	95	5	tr	red-brown and minor orange-pink siltstone, mudstone, and very fine-grained sandstone; trace limestone; calcareous
900	910	0	0	90	10	0	red-orange and red-brown with trace green fine-grained sandstone, siltstone, and mudstone; calcareous
910	920	0	0	80	20	0	“
920	930	0	0	50	50	0	pink-orange and red-brown siltstone, mudstone, and sandstone; sandstone is fine- to medium-grained and consists of quartz, feldspar, lithic fragments, and mafic minerals; calcareous; Entrada Sandstone?
930	940	0	0	50	50	0	“
940	950	0	0	10	90	0	“
950	960	0	0	10	90	0	“ fine-grained sandstone
960	970	0	0	5	95	0	“ brown red and orange red
970	980	0	0	5	95	0	“
980	990	0	0	tr	100	0	red-orange very fine-grained sandstone; trace green and purple siltstone; calcareous
990	1000	0	0	tr	100	0	“

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Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
1000	1010	0	0	tr	100	0	orange-red and pink-orange sandstone with trace mudstone; sandstone is fine-grained and consists of quartz, feldspar, lithic fragments, and mica; slightly calcareous
1010	1020	0	0	tr	100	tr	“ trace limestone
1020	1030	0	0	tr	100	tr	“
1030	1040	0	0	tr	100	tr	“
1040	1050	0	20	5	75	tr	red-orange and pink-orange sand, sandstone, and mudstone; sand is fine-grained and consists of quartz, feldspar, and lithic fragments; trace limestone; calcareous
1050	1060	0	0	0	100	tr	red-orange-brown and trace pink-white and green fine-grained sandstone composed of quartz, feldspar, lithic fragments, and mica; trace limestone; slightly calcareous
1060	1070	0	0	10	90	tr	red-orange-brown and trace pink-white and green fine-grained sandstone and sandy mudstone; sandstone consists of quartz, feldspar, and lithic fragments; slightly calcareous
1070	1080	0	0	10	90	tr	“
1080	1090	0	0	10	90	tr	“
1090	1100	0	0	10	90	tr	“
1100	1110	0	80	10	10	tr	brown-red, orange-red, green, and gray sand, mudstone, sandy mudstone, siltstone, and quartz-rich fine-grained sandstone; trace limestone; slightly calcareous

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ss=sandstone; ls=limestone

Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
1110	1120	0	25	50	25	tr	red-brown, orange, green, and gray mudstone, sandy mudstone, sand, and fine-grained sandstone; trace limestone; slightly calcareous
1120	1130	0	0	90	10	tr	brown-red and green with minor orange and gray mudstone, micaceous sandy mudstone, and fine-grained sandstone; trace limestone; Carmel Formation?
1130	1140	0	0	70	30	tr	brown-red and orange with minor green mudstone, sandy mudstone, and fine-grained sandstone; trace limestone; calcareous
1140	1150	0	0	30	70	tr	brown-red and orange with minor green sandstone, mudstone, sandy mudstone, and siltstone; sandstone is fine- to medium-grained and consists of quartz, feldspar, and lithic fragments; trace limestone; calcareous
1150	1160	0	0	90	8	2	green with brown-red siltstone, mudstone, sandstone, and limestone; trace chert and pyrite; slightly calcareous
1160	1170	0	80	10	10	0	pink-orange sand with brown and green siltstone and sandstone; sand is fine to medium and consists dominantly of quartz with minor feldspar and lithic fragments; non calcareous
1170	1180	0	90	5	5	0	“
1180	1190	0	10	80	10	tr	brown-red, pink-orange, and green mudstone, sandy mudstone, sand, and sandstone; sand is fine to medium and consists of quartz with minor feldspar and lithic fragments; non calcareous

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Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
1190	1200	0	0	0	0	0	no sample
1200	1210	0	0	90	10	tr	brown, red-orange, and green mudstone, sandy mudstone, siltstone, and sandstone; trace limestone; slightly calcareous
1210	1220	0	0	90	10	tr	“
1220	1230	0	0	2	98	0	red-orange and minor green and white fine-grained sandstone and mudstone; sandstone consists of quartz, feldspar, lithic fragments, and mafic minerals; slightly calcareous
1230	1240	0	0	tr	100	0	red-orange with minor brown and green quartz-rich sand and siltstone with trace sandstone; slightly calcareous carmel?
1240	1250	0	0	tr	100	0	red-orange fine-grained sandstone composed of quartz, feldspar, and mafic minerals with trace mudstone; slightly calcareous
1250	1260	0	0	0	100	0	red-orange and white sandstone; sandstone is fine-grained and consists of quartz, feldspar, lithic fragments, and mafic minerals; non calcareous
1260	1270	0	0	0	100	tr	“ trace gray limestone
1270	1280	0	0	0	100	tr	red-orange and pink-yellow sandstone; sandstone is fine- to medium-grained and consists of quartz, feldspar, and lithic fragments; trace limestone; non calcareous
1280	1290	0	0	0	100	tr	yellow-white-pink fine to medium quartz-rich sandstone with trace limestone; non calcareous; Navajo Sandstone?

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Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
1290	1300	0	0	0	100	0	“ no limestone
1300	1310	0	80	tr	20	0	yellow-pink fine- to medium-grained quartz-rich sand and sandstone with green and red-brown mudstone and siltstone; non calcareous
1310	1320	0	90	tr	10	0	“
1320	1330	0	90	tr	10	0	“ yellow white
1330	1340	0	90	tr	10	0	“
1340	1350	0	90	tr	10	tr	“ trace limestone
1350	1360	0	90	tr	10	tr	“ pink tan
1360	1370	0	100	0	0	tr	light orange-pink and minor gray and red-brown quartz-rich fine to medium sand; trace limestone; non calcareous
1370	1380	0	100	0	0	tr	“
1380	1390	0	98	0	0	2	light orange-pink and minor gray and red-brown quartz-rich fine to medium sand with minor limestone; non calcareous
1390	1400	0	95	0	0	5	“
1400	1410	0	100	0	0	tr	pink-orange fine to medium quartz-rich sand; trace limestone; non calcareous
1410	1420	0	100	0	0	tr	“
1420	1430	0	100	0	0	tr	“
1430	1440	0	100	0	0	tr	“
1440	1450	0	100	0	0	tr	“

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ss=sandstone; ls=limestone

Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
1450	1460	0	100	0	0	0	pink-orange fine to medium quartz-rich sand; non calcareous
1460	1470	0	100	0	0	0	“
1470	1480	0	100	0	0	0	“
1480	1490	0	100	0	0	0	“
1490	1500	0	100	0	0	0	“
1500	1510	0	100	0	0	0	“
1510	1520	0	100	0	0	0	“
1520	1530	0	100	0	0	0	“
1530	1540	0	100	0	0	0	“ pink and trace red
1540	1550	0	100	0	0	0	“
1550	1560	0	100	0	0	0	“
1560	1570	0	100	0	0	0	“
1570	1580	0	100	tr	0	0	pink-tan fine to medium quartz-rich sand; trace mudstone; non calcareous
1580	1590	0	100	0	0	0	“ no mudstone
1590	1600	0	100	0	0	0	pink-orange fine to medium quartz-rich sand; non calcareous
1600	1610	0	100	0	0	0	“
1610	1620	0	100	0	0	0	“
1620	1630	0	100	0	0	0	“
1630	1640	0	100	0	0	0	“

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ss=sandstone; ls=limestone

Depth Range (feet)		PERCENTAGES					COMMENTS
		unc*	dis*	consolidated			
		sand/ gravel	ss*	ms*	ss*	ls*	
1640	1650	0	100	0	0	0	“
1650	1660	0	100	0	0	0	“
1660	1670	0	100	0	0	0	“
1670	1680	0	100	0	0	0	“
1680	1690	0	100	0	0	0	“
1690	1700	0	50	0	50	0	orange sand and sandstone; sand is fine- to medium-grained and consists dominantly of quartz with feldspar, and lithic fragments; non calcareous
1700	1710	0	90	0	10	0	“
1710	1720	0	90	0	10	0	“
1720	1730	0	90	0	10	0	“
1730	1740	0	50	0	50	0	“
1740	1750	0	100	0	0	0	orange fine to medium quartz-rich sand; non calcareous
1750	1760	0	100	0	0	0	“
1760	1770	0	100	0	0	0	orange fine to medium quartz-rich sand; non calcareous
1770	1780	0	100	0	0	0	“
1780	1794	0	90	0	10	0	orange and minor red sand and fine-grained sandstone; sand is fine to medium and consists dominantly of quartz with minor feldspar, and lithic fragments; non calcareous

*unc=unconsolidated; disag=disaggregated; ms=mudstone, sandy mudstone, and siltstone;
ss=sandstone; ls=limestone